EXPLAINING OPTIONALITY *WH*-MOVEMENT IN BABINE-WITSUWIT'EN*

Kristin Denham

Western Washington University and University of Washington

In this paper, I illustrate that Babine-Witsuwit'en, an endangered Athabaskan language of Northern British Columbia, exhibits optional *wh*-movement and I propose how to account for this optionality In the first section, I show that many languages which appear to have optional *wh*-movement do not. Instead, the fronting in these language is motivated for other reasons such as focus, topicalization, or *wh*-clefting In the second section, I argue that Babine-Witsuwit'en is truly optional I show that the *wh*-fronting is the result of neither topicalization, clefting, nor focus movement, and that non-*wh*-phrases do not have the same freedom of position Also, the fronting exhibits island violations characteristic of moved constituents The fronted and in-situ versions mean the same thing and are not used in different pragmatic contexts In the third section, I account for the optionality through optional selection of C from the lexicon and I examine the consequences of this proposal

1 Apparent Optional *Wh*-Movement

In this section, I investigate numerous languages which at first glance may appear to have optional *wh*-movement I show that the fronting in these languages is not optional, but is motivated for other reasons The languages I discuss are from quite diverse language families several languages of the Niger-Congo family (Kiswahili Gikuyu Igbo and Akan) Egyptian Arabic, and French

None of the analyses in this section constitute complete analyses of *wh*-movement or question formation in each language I do not investigate all question types or restrictions on all possible positions of *wh*-phrases Instead, I aim to look at the relevant data in an effort to suggest a possible analysis In the languages to be discussed below, I argue that the fronting in the languages discussed here is either a result of focus, topicalization, or *wh*-clefting The features motivating the movement are not *wh*-features in Spec of CP, but focus or topicalization features In the Minimalist Program, all movement is motivated by feature-checking, so, for example, when a particular word is topicalized in an English sentence, this occurs because that word raises to check off a Topicalization (TOP) feature in a Topicalization Phrase Focused elements behave similarly in some languages, raising to check off a FOC feature in a Focus Phrase (English uses

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stress, not fronting, to focus words and phrases) *Wh*-clefts also serve to focus a particular constituent Clefting is a common method of focusing a constituent across languages Some focus feature must be present in sentences that contain a focused word or phrase So, I assume that in sentences with clefted elements, the fronting is a result of movement which is motivated by the need to check off a strong focus feature

Also, in sentences involving topicalization or focus, the fronted version has a different meaning from the in-situ version This is important because a crucial aspect of Minimalist syntax is that all syntactic operations must be minimal in derivational cost Thus, the shortest and least complex derivations will be the only ones to succeed and yield a grammatical derivation Under a Minimalist approach it is problematic if data exist in which two non-identical sentences have identical interpretations because it seems to suggest that optionality can exist in the computational system In the languages discussed in this section each pair of related sentences does differ in meaning Thus, the derivations being compared are not identical One contains a focus or topicalization feature, the other does not

I would like to suggest that this is the case in languages that involve scrambling" as well For example, objects in German can be scrambled to a position to the right of the subject Langer (1995) argues that sentences with scrambled objects in German have different meanings from sentences with the canonical word order He proposes that the relevant feature forcing movement in these cases is a focus feature Thus, the derivations being compared are not identical—one contains a focus feature that must be checked off The feature of the functional projection is checked off, but the focus feature of the lexical item remains and is interpreted at LF

4.1 Akan

Akan, a member of the Kwa family, which is in turn a member of the Niger-Congo family, exhibits two strategies of question formation *wh*-words in situ or at the beginning of a clause, as shown below, in examples from Saah (1988)

(1) a Kofi kɔɔ he
Kofi go-PST where
'Where did Kofi go?'

b ehe na Kofi kɔɔe
where FOC Kofi go-PST
'Where did Kofi go?'

Saah says that because the *wh*-phrase appears in object position in (1a), it appears in the objective case without the prefix *ɛ-* In (1b), the *wh*-phrase takes the nominative case because it occurs in sentence-initial position Saah notes that there is a slight semantic difference between the two versions The sentences with clause-initial *wh*-phrases are more emphatic than those in which the *wh*-phrase is in situ The focus particle *na* is also an additional clue that what we have here is

focus movement, not *wh*-movement Saah gives examples where either the fronted version or the in situ version is less acceptable because a focus or non-focus reading is inappropriate For example, the sentence in (2a) below is a fixed expression used as a greeting Fronting of *dɛn* 'what/how' is less preferred

(2) a Wo ho te dɛn?
you Poss self be-PRES what/how
'How are you?'

b *Dɛn na wo ho te
what/how FOC you Poss self be-PRES

Saah claims that because (2a) is a fixed expression it cannot change its point of emphasis, so a clause-initial *wh*-phrase is therefore unacceptable Likewise there are some questions in which the fronted *wh*-phrase is preferred

(3) a Adɛn nti na wobaa ha?
reason why FOC you-come-PST here
'Why did you come here?'

b *Wobaa ha adɛn nti?
you-come-PST here reason why

Saah says that when a *particular* reason is being asked for the *wh*-phrase is preferred in sentence-initial position

Also the focus particle *na* is the same particle used to focus any constituent regardless of whether it is a *wh*-phrase Boadi (1974) shows that all major categories in Akan can be moved to sentence-initial position and focused by attaching *na* Compare the focused (a) and non-focused (b) sentences below from Saah (1981) and Boadi (1974)

(4) a Mebaa ha nnɛra
I-come-PST here yesterday
'I came here yesterday'

b Me na mebaa ha nnɛra
I FOC I-come-PST here yesterday
I was the one who came here yesterday

(5) a Kofi bɔɔ Ama
Kofi hit-PST Ama
Kofi hit Ama

b Ama na Kofi bɔɔ no
Ama FOC Kofi hɪs-PST her
'It was Ama who Kofi hɪt '

Saah also shows that *eyɛ* 'ɪt ɪs' may optɪonally occur ɪn focused questɪons, further emphasɪzɪng that ɪt ɪs a focus and not a *wh*-movement constructɪon

(6) a Kofi kɔɔ he?
Kofi go where
'Where dɪd Kofi go?'

b (eyɛ) ehe na Kofi kɔɔe?
ɪt was where FOC Kofi went
'Where was ɪt that Kofi went?'

It seems clear that the operatɪon whɪch fronts a *wh*-phrase ɪn Akan ɪs focus, not *wh*-movement

1 2 Gĩkũyũ

Bergvall (1983) dɪscusses *wh*-movement ɪn the Bantu language Gĩkũyũ She shows that *wh*-phrases are possɪble eɪther ɪn sɪtu or at the begɪnnɪng of the clause as shown below

(7) a Maheɪre o kĩng ang'ɪ?
they-gave who crab
'Who dɪd they gɪve a crab?'

b Noo maheɪre kĩng'ang'ɪ?
FP-who they-gave crab
Who dɪd they gɪve a crab?'

Note that when the *wh*-phrase ɪs fronted, a focus partɪcle *ne* (+ *o*, 'who', resultɪng ɪn *noo*) must be present

In complex questɪons, the *wh*-phrase may appear eɪther ɪn sɪtu or fronted as well, as ɪn Bergvall's example, and agaɪn the focus partɪcle must be present

(8) a [ũgwĩra [Ngũgĩ oɪgɪre maheɪre kĩng'ang'ɪ o]]?
you-thɪnk Ngugɪ saɪd they-gave crab who

b [Noo$_i$ ũgwĩra [Ngũgĩ oɪgɪre maheɪre kĩng ang ɪ t$_i$]]?
FP-who you-thɪnk Ngugɪ saɪd they-gave crab
Who do you thɪnk Ngugɪ saɪd they gave a crab to?'

The same focus particle is employed in non-*wh*-constructions

(9) Nī-maheire Kamau kīng'ang'i
FP-they-gave Kamau crab
'They gave Kamau a crab'

A better translation of this sentence is something like "It is the case that they gave Kamau a crab" (John Mugane, personal communication) The fronting in Gīkūyū *wh*-questions appears to be a straightforward example of a focus construction There is no reason to believe that Gīkūyū exhibits optional *wh*-movement The fronting is simply a result of focus, used both in sentences with *wh*-phrases and without In both sentence types, a phrase raises to check off a strong focus feature in a Focus Phrase

1 3 Kiswahili

According to Hauman (1985) *wh*-words in Kiswahili may also appear either in situ or in sentence-initial position The following examples are from Perrott (1957) (10) shows an in-situ *wh*-word and (11) shows a fronted *wh*-phrase

(10) A-li-fika lini?
3sg-past-arrive when
'When did s/he arrive?'

(11) Kwa nini chakula ki-me-chelewa?
why food 3sg-perf-late
'Why is the food late?'

Welmers (1973) also says that *wh*-words may optionally occur in sentence-initial position However, he argues for Swahili and numerous other Bantu languages that when a *wh*-phrase is fronted, it is topicalized This is correct according to the native speaker I consulted The in-situ versions are most common and most natural and the fronted versions may only be used in special circumstances, such as when telling a story (the fronted word must already exist in the discourse) The following (b) examples are unacceptable without some prior context

(12) a Unatoka wapi?
you-go where

b *Wapi unatoka?
where you-go

Where are you going?

(13) a Unasoma nini?
you-read what

b *Nini unasoma?
what you-read

'What are you reading?'

Bokamba (1976) calls the questions with fronted *wh*-words "focused" *wh*-questions The focus is reflected in Bokamba's translations Consider his examples below

(14) a Beya pesaka mokunda mazono na nani?
Beya gave letter yesterday to whom
'To whom did Beya give a letter yesterday?'

b Na nani Beya pesaka mokunda mazono?
'To whom, specifically, did Beya give the letter yesterday?'

(15) a Beya pesaka Nzuzi mazono inki?
Beya gave Nzuzi yesterday what
'What did Beya give Nzuzi yesterday?'

b Inki Beya pesaka Nzuzi mazono?
'What, specifically, did Beya give Nzuzi yesterday?

Seyed Maulana (personal communication) reports however, that *lini* 'when' and *kwa nini* 'why' are somewhat better than other *wh*-words in sentence-initial position

(16) a Alifika lini?
s/he-arrived when

b Lini alifika?

'When did s/he arrive?'

(17) a Chakula kimechelewa kwa nini?
food it is late why

b Kwa nini chakula kimechelewa?

Why is the food late?'

Maulana says that the fronted versions of these two *wh*-expressions have become more common in the last couple of decades He suggests that it is because of the influence of English

What seems clear is that optional *wh*-movement (movement of a *wh*-phrase to Spec of CP) is not at work in Swahili *wh*-questions, though topicalization features or focus features in TopP or FocP respectively may result in preposed *wh*-phrases

1 4 Igbo

Goldsmith (1981) shows that *wh*-phrases in Igbo may occur in situ or fronted to the beginning of the clause

(18) a Ì lílu gíní
you ate what
'What did you eat?'

b Gíní ka ı lílu
what that you ate
'What did you eat?'

Goldsmith glosses the morpheme *ka* as 'that', but Welmers (1973) calls it a marker of topicalization Welmers also notes that both orders in (18) are possible, but says the "topicalized" order in (18b) is preferred The facts here seem very much like those in Akan I think the fronting in Igbo is more akin to focus than topicalization And as in Akan, *o bu* 'it is' may optionally precede the fronted question word, forming a cleft

(19) O bù gíní ka ı lílu
it is what that you ate
What is it that you ate?'[1]

Thus, it appears that *wh*-phrases in Igbo are fronted as a result of focus features in a FocP—the *wh*-phrase fronts in order to check off this focus feature

1 5 Egyptian Arabic

Wh-words in Egyptian Arabic, though not in Standard Arabic, may either occur in situ or fronted Examples below are from Kenstowicz and Wahba (1983)

(20) a Farid ištara ʔeeh?
Farid buy what

[1] There is another method of question formation in Igbo discussed in Goldsmith (1981) and Welmers (1973) This method takes the form of a relative clause and uses a generic word/complementizer *kedu* preceding the noun phrase See Goldsmith (1981) for further discussion

b ?eeh illi Fariid ištaraah?
what that Fariid buy-it

'What did Fariid buy?'

(21) a Fariid ištara ?ayy kitaab?
Fariid buy which book

b ?ayy kitaab Fariid ištaraah?
which book Fariid buy-it

'Which book did Farid buy?'

(22) a Fariid raah feen?
Fariid where went

b Feen Fariid raah?

'Where did Fariid go?'

Kenstowicz and Wahba state that when an object *wh*-phrase appears in fronted position, it is associated with a resumptive pronoun when the *wh*-phrase is an NP, while no resumptive pronouns appear with adverbial *wh*-phrases The resumptive pronoun appears as an enclitic to verbs, nouns, prepositions, and the complementizer *inn* 'that There is no overt resumptive pronoun with subject *wh*-phrases Also, the complementizer *illi* must occur after the argument *wh*-phrases *miin* 'who and *?eeh* what as in (20) but does not occur after *feen* 'which nor any of the adjunct *wh*-words

Cheng (1991) points out the similarities that relative clauses and cleft sentences share with the *wh*-fronting constructions in Egyptian Arabic Her examples comparing the constructions are below

relative clause
(23) Il-raagil illi Mona shaafit-uh
the-man that Mona saw-him
the man that Mona saw'

cleft
(24) (Dah) Muhamad illi gih
this Mohammed that came
It is Mohammed who came '

wh-question
(25) a Miin illi Mona darabit-uh
who that Mona hit-him
'Who did Mona hit?'

b Eeh illi Mona ?arit-uh
what that Mona read-it
'What did Mona read?'

Illi, which Wahba (1984) treats as a complementizer, occurs in all of the above constructions It is, however, distinct from the complementizer *inn* used in embedded clauses, as Cheng points out

(26) Mona iftakarit inn Farid saafir
Mona thought that Farid left
'Mona thought that Farid left'

Cheng shows that the lack of island violations in *wh*-fronting sentences shows that *wh*-fronting questions and relatives clauses/clefts are the same process and do not involve movement of a relativized NP or *wh*-word.

Cheng argues instead that *wh*-fronting is the result of *wh*-clefting It is not a full cleft but a reduced cleft in the sense of McCloskey (1979) Cheng s reduced cleft structure (based on McCloskey's) is given below

(27) [$_{CP}$ [$_{DP}$ miin$_i$] [$_{CP}$ OP$_i$ illi [$_{IP}$ Mona shaafit-uh$_i$]]]
who that Mona saw-him
Who did Mona see?'

This differs from a full cleft like the English *It is a bagel that Hugh wants to eat* in that it has no copula and it has an NP subject However, Cheng argues, in (27) there is still a subject-predicate relationship since the *wh*-word *miin* who' is the subject of the predicate *illi Mona shaafit-uh* 'that Mona saw him' Given such a *wh*-cleft analysis Cheng claims that the use of *illi* in *wh*-fronting constructions as well as relative clauses and clefting follows *illi* is used in clauses in which a predicate sentence is created [2]

[2] However, *illi* is not required when the *wh*-phrase contains *?ayy* which Perhaps this has to do with its inherent presuppositionality Thus *which* does not cleft, but is instead part of a focus structure Clefting would be redundant with a *wh*-phrase that is inherently focused This of course raises the question of why other languages allow clefting with *which* Cheng does not deal with this issue and I leave it for future research This is reminiscent of the data in Akan discussed above—when a particular reason or thing is being asked for, the *wh*-phrase is preferred sentence-initially in a focused position

The fronting of *wh*-adjuncts in Egyptian Arabic appears to be a different process from that involving *wh*-arguments Cheng argues that it is not *wh*-clefting, but topicalization [3] She compares the two constructions below

wh-adjunct fronting
(28) a Ma'a miin Mona raahit il-Qahirah
with whom Mona went to-Cairo
'With whom did Mona go to Cairo?'

non-*wh* topicalization
b Fi-l-shari' dah Mona kaanit bitdawwar 'ala sha??ah
on-the-street DEM Mona was looking for apartment
'On that street, Mona was looking for an apartment'

Illi may not occur in adjunct *wh*-fronting Cheng argues that if we assume a *wh*-movement analysis of this *wh*-fronting, as in Wahba (1984), then we cannot explain why *illi* is prohibited when *wh*-adjuncts are fronted Cheng speculates about why adjuncts are not allowed in the clefting construction, but leaves this as an open question

Cheng points out that resumptive pronouns are not allowed in non-island configurations with *wh*-adjuncts

(29) a Fi-l-shari dah Mona kaanit bitdawwar 'ala sha??ah
on-the-street DEM Mona was looking for apartment

b *Fi-l-shari dah Mona kaanit bitdawwar ala sha??ah **hinaak**
on-the-street DEM Mona was looking for apartment there

while they are required in island configurations

(30) a Fi-l-hayy dah Ali kaan ye'raf naas kiti kaanu 'ayshin **hinaak**
in-the-suburb DEM Ali used to-know people many were living there

b *Fi-l-hayy dah Ali kaan ye'raf naas kiti kaanu 'ayshin
in-the-suburb DEM Ali used to-know people many were living

She notes that this is quite different from the behavior of resumptive pronouns in *wh*-argument questions in which *wh*-words may freely front in island constructions and resumptive pronouns are always present This distinction provides additional evidence that argument and adjunct *wh*-phrases behave differently in Egyptian Arabic

[3] Cheng notes that some speakers prefer *wh*-adjuncts to always remain in situ

So Cheng argues that *wh*-fronting in Egyptian Arabic is the result of either *wh*-clefting (for argument *wh*-phrases) or topicalization (for adjunct *wh*-phrases)

1 6 French

There is apparent optional *wh*-movement in spoken French *Wh*-phrases may occur either in situ or fronted in simple questions When the *wh*-phrase occurs sentence-initially, *est-ce que* is required [4]

(31) a Qu'est-ce que tu fais?
what is-it that you do
'What are you doing?'

b Tu fais quoi?
you do what
'What are you doing?'

The fronted version in (31a) is clearly not the result of simply optionally moving the *wh*-word in (31b) The literal translations are different and different forms of the *wh*-phrases are required in each Note that the *wh*-word (as opposed to the *wh-est-ce-que*-phrase) is required in the in-situ position while the longer *wh*-phrase is required in the fronted position

(32) a Qu'est-ce que tu fais?
what is-it that you do
'What is it that you are doing'

b *Tu fais qu'est-ce que?

(33) a Tu fais quoi?
you do what
'What are you doing?'

b *Quoi tu fais?

This appears to be a straightforward instance of *wh*-clefting versus in-situ *wh*-question formation Langacker (1965, 1972) suggests that the questions with *qui est-ce que, qu'est-ce que*, etc are the interrogative counterparts of cleft sentences Non-*wh* cleft sentences have the same construction Some non-*wh*- and *wh*-cleft pairs from Langacker are below

[4] I do not include here a discussion of stylistic inversion (in which the main verb and subject invert *Que fais-tu* What do you') This strategy of question formation is no longer very common in spoken French

(34) a C'est un loup qui court la-bas
it is a wolf that run over-there
'It s a wolf that's running over there '

b Qu'est-ce qui court la-bas?
what is it that run over-there
'What is it that's running over there?'

(35) a C'est Pierre qu'elle voit
it is Peter that she sees
'It's Peter that she sees '

b Qui est-ce qu'elle voit?
who is it that she sees
Who is it that she sees?'

Let's assume, then that French does not require *wh*-movement, but often employs *wh*-clefting There is, however still fronting within the *wh*-cleft, as illustrated in the movement transformation below

(36) C'est quoi qui court la-bas → C est quoi qui court la-bas = Qu est-ce qui court la-bas?

The *wh*-word fronts in (36) and inversion takes place *Wh*-questions may be clefted in the same way in English For example the following derivation mirrors the French one in (36)

(37) It's who that's running over there → It's who that's running over there

= Who is it that's running over there?

Presumably, this fronting takes place to satisfy a strong focus feature This is reflected in the focused interpretations in these clefted *wh*-sentences in both languages

Fronting is required in embedded questions, though only *ce que* may be used, not *quoi* [5] (The *quoi* form is only allowed in situ) Also, inversion is prohibited in embedded clauses

(38) a Jean a demande [ce que Marie a fait]
John had asked what Mary had done
'John asked what Mary did '

b *Jean a demande [quoi Marie a fait]

[5] Langacker (1972) notes that *que'quoi* cannot begin an embedded question Instead *ce* plus a relative clause must be used Why this should be the case is not clear

c *Jean a demandé [Marie a fait quoi/ce que]

Wh-fronting is also obligatory in relative clauses

(39) a Un homme [que je connais] m'a telephone
a man who I know me had called
'The man who I know called me'

b *Un homme [je connais que] m a telephone

Let's look at how the selectional properties of verbs affect the restrictions on movement Fronting is required with verbs that take interrogatives, such as *demander* 'ask', as shown above in (38) However, a matrix verb which cannot take an interrogative exhibits a very different pattern The *wh*-word typically remains in situ

(40) Jean pense [que Pierre aime qui]?
John thinks that Peter likes who

It may not front to the beginning of the embedded clause

(41) *Jean pense que/ce que/ce qui Pierre aime?

Thus, only verbs that take interrogatives allow *wh*-words to front in the embedded clause This occurs so that the *wh*-feature may be checked off *Wh*-phrases may front to matrix sentence-initial position with verbs that take [-wh] complements but in such cases the full *est-ce-que*-phrase is required

(42) a Qui est-ce que Jean pense que Pierre aime?
b *Qui Jean pense que Pierre aime?

This again is an instance of *wh*-clefting

So the generalization seems to be that a *wh*-phrase may always stay in situ unless the verb takes an interrogative In this case, the *wh*-phrase fronts in order to check off a strong *wh*-feature in C This same pattern exists in American Sign Language (See Denham (forthcoming) for discussion of this aspect of French and ASL) French, therefore, does not have overt *wh*-movement like English except when the properties of the verb require it Also, a *wh*-phrase may appear in initial position in a cleft construction

1 7 Summary Focus Topicalization and Clefting

I have argued above that the languages that appear to exhibit optional *wh*-movement are instead fronting *wh*-words in order to focus these elements either through *wh*-clefting or some

other focus mechanism, or to topicalize them The basic position of *wh*-elements in the above languages seems to be in situ, and fronting occurs in order to check off features in the functional projections FocP or TopP

2 True Optional *Wh*-Movement

In this section, I show that Babine-Witsuwit'en has optional *wh*-movement, unlike the languages examined in the previous section I show that the *wh*-fronting is the result of neither topicalization, clefting, or focus movement Also, the fronting exhibits island violations characteristic of moved constituents

2 1 Background Information on Babine-Witsuwit'en

The basic word order in Babine-Witsuwit'en is SOV This is illustrated in the following examples

(43) Mary dilhtsen yik entsiy'
Mary 3srefl brother 3s loves 3s
'Mary loves her own brother

(44) Lillian tl'as 'iyilekh
Lillian dress 3s makes 3s
'Lillian is making a dress '

(45) Silhtsen Mabel yunt'iy
1s brother Mabel 3s likes 3s
'My brother likes Mary '

(46) Lillian bitse' lhalhde' Mabel yin'e'n
Lillian 3s daughter yesterday Mabel 3s saw 3s
'Lillian's daughter saw Mabel yesterday '

2 2 Optional Movement in Simple Questions

In questions, object question words may occur in sentence-initial position, as in (47a), though they may also remain in situ, as in (47b) The meaning in the (a) and (b) versions is the same

(47) a Ndu Lillian yunket?
what Lillian 3s bought 3s

b Lillian ndu yunket?

'What did Lillian buy?'

Non-*wh* NPs do not have this freedom of movement in Babine-Witsuwit'en A sentence corresponding to (48) with no *wh*-word allows only SOV order

(48)a Lillian dus yunket
Lillian cat 3s bought 3s'

b *Dus Lillian yunket

'Lillian bought a cat

(48b) can only have the unlikely meaning that a cat bought Lillian Along the same lines, in a sentence like the following, where both subject and object are capable of being the agent fronting the object simply results in that NP becoming the agentive subject

(49) Lillian George yunt'iy'
Lillian George 3s likes 3s
Lillian likes George '

(50) George Lillian yunt'iy'
'George likes Lillian '

The object can precede the subject, but when it does it is interpreted as focused and a focus marker *'en* (for human singular), *eni* (for human plural), and *e* (for nonhumans) must follow it

(51) George 'en Lillian yunt'iy'
George FOC Lillian 3s likes
'It's George that Lillian likes '

(52) Dus 'e George yunket
cat FOC George 3s bought 3s
'It's a cat that George bought ' (not a dog)

Also, a fronted *wh*-phrase and a focused NP can both appear sentence-initially

(53) Hoo' lhes 'e nts e Lillian yunket
No bread FOC where Lillian 3s bought 3s
No, where did Lillian buy the **bread**?' (not the fish)

while two non-*wh*-elements may not be focused

(54) a *Lhes 'e Friday 'e Lillian yunket
bread FOC Friday FOC Lillian 3s bought 3s

b *Friday 'e lhes 'e Lillian yunket
'Lillian bought the bread Friday'

This suggests that *wh*-fronting and NP focusing are distinct operations

Adjunct *wh*-phrases may also occur either in situ or fronted, as shown in (55) and (57), but the non-*wh* counterparts do not generally occur in the fronted position, as shown in (56) and (58)[6]

(55) a Sharon *book* nts'ena yik'iyetalhdic?
Sharon book how 3s will read 3s

b Nts'ena Sharon *book* yik'iyetalhdic?

'How will Sharon read the book?'

(56) a Sharon *book* 'agh yik iyetalhdic
Sharon book quickly 3s will read 3s

b *'Agh Sharon *book* yik yietalhdic

Sharon will read the book quickly'

(57) a Sharon stseghe' nts'ena yilhtl'ol?
Sharon hair how 3s braided 3s

b Nts'éna Sharon stseghe' yilhtl'ol?

'How did Sharon braid my hair?'

(58) a Sharon stseghe' dzikh yilhtl'ol
Sharon hair crooked 3s braided 3s

b *Dzikh Sharon stseghe' yilhtl'ol

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[6] There is some variability with adjuncts Sentential adverbials have more freedom of position as in many languages

(1) a Lillian bivez lhkan iwhanetadelh
Lillian her daughter tomorrow will return
b Lhkan Lillian bivez iwhanetadelh
Lillian s daugher will return tomorrow

'Sharon braided my hair crooked'

2.3 Optional Movement in Complex Questions

The optional fronting of both argument and adjunct *wh*-phrases also occurs in complex questions. Example (59) shows the three possible positions for an argument *wh*-phrase.

(59) a George [Lillian ndítni *bookt*'ah yik'iyelhdic] yilhni?
George Lillian which book 3s read 3s tell
'Which book did George tell Lillian to read?'

b George [ndítni *bookt*'ah Lillian yik'iyelhdic] yilhni?

c Ndítni *bookt*'ah George [Lillian yik'iyelhdic] yilhni?

These orders, however, are not allowed in non-*wh*-sentences.

(60) a George [Lillian ggi *book* yik iyelhdic] yilhni?
George Lillian that book 3s read 3s tell

b *George [ggi *book* Lillian yik iyelhdic] yilhni?

c *Ggi *book* George [Lillian yik'iyelhdic] yilhni?

'George told Lillian to read that book'

The same is true with adjuncts. The *wh*-phrases may occur fronted, while the non-*wh*-adjuncts may not.

(61) a George [Lillian bicay nts'e noolyekh] wika'ninzin?
George Lillian her grandson where 3s play 3s wants

b Nts'e George [Lillian bicay noolyekh] wika'ninzin?

'Where does George want Lillian's grandson to play?'

(62) a George [Lillian bicay 'ats noolyekh] wika ninzin
George Lillian her grandson outside 3s play 3s wants

b *'Ats George [Lillian bicay noolyekh] wika ninzin
outside George Lillian her grandson 3s play 3s wants

'George wants Lillian's grandson to play outside '[7]

The fact that *wh*-phrases may occur either in-situ, fronted in the embedded clause (in complex questions), or fronted in the matrix clause, while non-*wh*-phrases must stay in their canonical positions provides evidence that the operation at work in the *wh*-constructions is neither scrambling nor topicalization since either of those operations should apply to non-*wh*-phrases as well

2 4 Clefting

Additional evidence that *wh*-movement is the operation at work here comes from the fact that the clefting operation is also distinct The verb *'it'tw* 'be' is required in clefting constructions, as is the emphatic particle *hin*

(63)a Ggin dini budiclhye
that man I know
'I know that man '

b Ggin dini budiclhye hin it'iw
that man I know EMPH be
It is that man that I know

But with a *wh*-word in fronted position no form of be' is necessary, nor is the emphatic *hin* And again, in (64b), for example, the fronted *wh*-word is not emphatic The meaning is the same as in (64a)

(64)a Ggin dini mbi udiclhye?
that man who 3s know
'Who does that man know?'

b Mbi ggin dini udiclhye?
Who does that man know?'

2 5 Extraction from Islands

Non-finite verbs do not exist in Babine-Witsuwit'en so it is unlike Iraqi Arabic (Wahba 1991) in which *wh*-phrases can occur in situ in matrix questions and non-finite embedded clauses but not in embedded tensed clauses

In order to show that *wh*-movement (which I am assuming is movement to Spec of CP) occurs in the clauses above with fronted *wh*-phrases, we need to show that the relevant structures exhibit a sensitivity to syntactic principles typical of movement operations *Wh*-islands are of no use in Babine-Witsuwit'en since there is a restriction on having more than one *wh*-phrase per sentence

Extraction out of sentential subjects is bad, as expected

(65) a George mbi yudilhye Lillian yilhggi?
George who 3s know Lillian 3s surprised

'That George knows who surprised Lillian?'

b *Mbi$_i$ George t$_i$ yudilhye Lillian yilhggi?

'Who that George knows surprised Lillian?'

Extraction from coordinate structures are also unacceptable

(66) a George tl'ah mbi hibin e'n?
George and who you saw

'You saw George and who?'

b *Mbi George tl'ah hibin'e'n?

'Who did you see George and?'

We have evidence, then that the fronted *wh*-phrases are moved to the fronted position rather than base-generated there since they obey typical island constraints seen in many languages

2 6 Summary

We have seen in this section that optional *wh*-movement exists I have shown that *wh*-phrases are allowed to front to clause-initial position in Babine-Witsuwit'en Non-*wh*-phrases are not allowed this freedom of position I have also shown that this fronting does not appear to be the result of any other kind of fronting operation such as topicalization, focus, or clefting In addition, Babine-Witsuwit'en exhibits island violations characteristic of movement, suggesting the *wh*-elements are not base-generated in the fronted positions I conclude the *wh*-movement exists in the language, but is optional

3 Explaining Optional *Wh*-Movement

I have given evidence in the previous section that Babine-Witsuwit'en exhibits optional *wh*-movement. The movement is not motivated by focus or topicalization features. The *wh*-phrase may appear in situ or fronted with no apparent differences in meaning and no differences in pragmatic context, and extraction of the *wh*-words exhibits island constraints typical of movement. In this section, I account for this optional *wh*-movement through optional selection of C.

3.1 No LF *Wh*-Movement

Following Aoun & Li (1993b), I assume that there is no LF movement of *wh*-elements, as first proposed by Huang (1982). They assume instead that the *wh*-phrases are coindexed with a higher operator. A question operator has been proposed by Katz & Postal (1964), Baker (1970), van Riemsdijk & Williams (1981), Pesetsky (1987), and Benmamoun (1991a, b). Assuming no LF movement of *wh*-elements is much more in line with Minimalist assumptions. All movement must be motivated, but if we assume LF movement of in-situ *wh*-phrases in questions with multiple *wh*-words in English, what could motivate the movement? The first *wh*-word has already raised to check the feature off, so no feature remains, and there is therefore no motivation for a second *wh*-element to raise. Chomsky (1995) also assumes that *wh*-in-situ elements make use of "something like unselective binding" in determining their interpretations, as suggested here. So, I assume that there is no LF-raising of *wh*-elements, but that they either raise overtly to check off a *wh*-feature in C (which is always strong; that is, if it is present at all, it has a [−wh] feature), or they remain in situ and are coindexed with an operator in a higher position.

3.2 The Proposal

3.2.1 Optional Selection of C

I propose that the optionality in *wh*-questions arises at the point of selection from the lexicon, rather than assuming the unsatisfying solution that the same *wh*-feature can either be strong or weak within any given language. Chomsky (1993) states that the strength of features is what varies across languages, so having such variation within a language loses any explanatory value. Also, I attempt to eliminate feature strength completely in *wh*-features, as does Chomsky in recent lectures. Thus, if an interrogative C is present at all, a *wh*-feature will be present which must be checked off.

Optional selection of lexical items falls out naturally in the Minimalist Program. Chomsky (1995) states that "it is at least reasonably clear that [the lexicon] contains some functional categories, complementizer (C), for example" (240). Thus, it is in the lexicon, I believe (or more precisely, in the array selected from the lexicon, the 'numeration") where we are most likely to find optionality. Any item may be selected or not. Chomsky says that there is no

meaningful question as to why one numeration is formed rather than another—or rather than none, so that we have silence" (227) He likens this to asking the question of why some integers are added together rather than others when doing addition Or proposing that a theory of the mechanisms of vision explain why someone chooses to look at a sunset The problem of choice of action is real, he says, but largely mysterious It is not our task here to investigate lexical choice So let's assume that an interrogative C can either be selected or not for any particular derivation If C appears in the numeration, then it will have a *wh*-feature, prompting *wh*-movement If C does not appear in the numeration, then no *wh*-movement takes place

This proposal accords well with Minimalist assumptions In section two I showed that two nonidentical sentences may have identical interpretations in Babine-Witsuwit'en However, this situation should not arise under Minimalism because only the most economical derivation of an array of items succeeds It may be explained, however, because of the fact that the arrays for the two sentences in an optional *wh*-movement language such as Babine-Witsuwit'en are not identical One contains C, the other does not The derivations being compared are, therefore, nonidentical and each succeeds because it is the most economical derivation for that particular array

Let's examine how optional selection of C can explain the facts in Babine-Witsuwit en [8] As shown in section two, the *wh*-phrase in the following examples can occur in any of the three positions shown

(67) a George [Lillian ndìtnı *book* bik ıyelhdic] yilhnı?
George Lillian which book 3s read 3s 3s told 3s

b George [ndìtnı *book* Lillian bik'ıyelhdic] yilhnı?

c Ndìtnı *book* George [Lillian bik'ıyelhdic] yilhnı?

'Which book did George tell Lillian to read?'[9] [10]

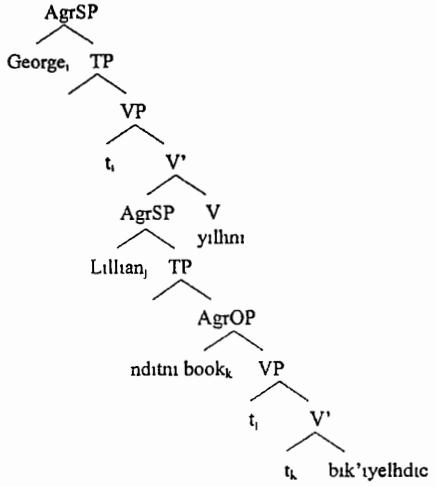
[8] We must, of course, make a distinction here between two kinds of C an interrogative C and a declarative C With Chomsky (1995) I assume that declarative C is listed in the lexicon and can be phonologically realized as *that* I also assume that interrogative C is a distinct lexical entry In English, it can appear as the overt lexical items *whether* and *if*, or simply as the feature [wh] In what follows when I refer to C being selected from the lexicon, I am referring to an interrogative C

[9] There are no infinitives in Babine-Witsuwit en Perhaps a better translation of *yilhnı* is 'say rather than 'tell' The verb in the embedded clause is fully inflected and 'Lillian' is the subject of the embedded clause Thus, the structure of the sentence is quite different from that of the English translation

[10] Any of the sentences in (71) can also be *yes/no*-questions though the *yes/no*-question marker *lec* (or *tol* for some speakers) is required sentence-finally The preferred method of *yes/no*-question formation is a two-sentence structure like the one below
(i) George nyudilhkit lec ' Sharon nts ewh witstaycih?

If no C is selected, (67a) is the result, as the tree below illustrates [11]

(68)



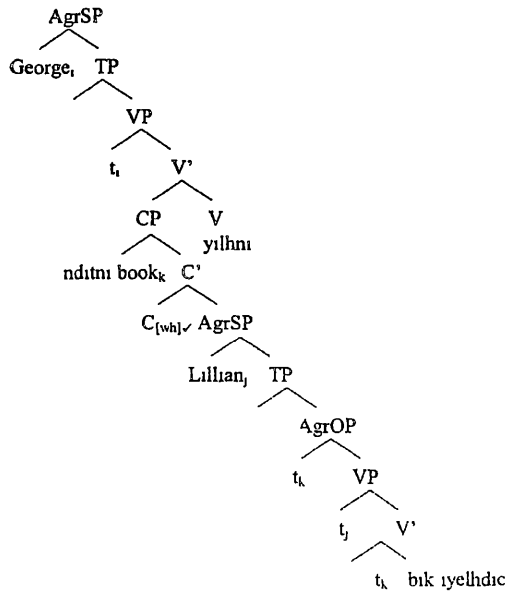
If a C is selected, either (67b) or (67c) results In both cases, the *wh*-phrase raises to check off the strong *wh*-feature in C The trees corresponding to these two sentences are given below

---

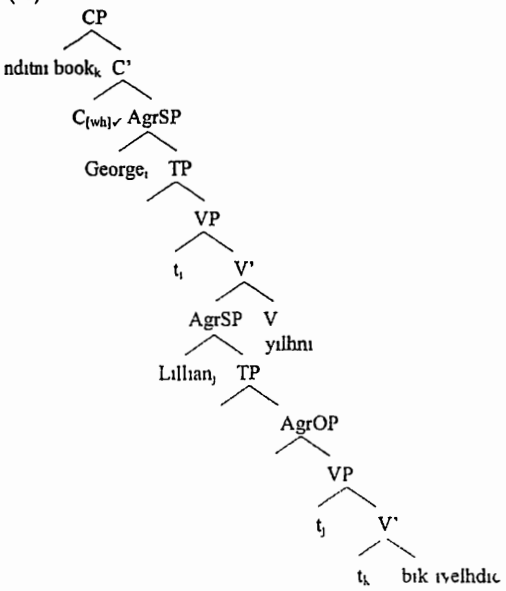
George 3s ask 2s Q Sharon when 3s comes
Did George ask you? When is Sharon coming?

[11] Only the relevant movement is shown Case-checking of the subject and object is overt in Babine-Witsuwit'en with the DPs raising to AgrSP and AgrOP respectively The verb also raises through AgrO T and AgrS checking off features as assumed in Chomsky (1993)

(69)


AgrSP
George$_i$ TP
VP
t_i V'
CP V
yılhnı
ndıtnı book$_k$ C'
C$_{[wh]\checkmark}$ AgrSP
Lılhan$_j$ TP
AgrOP
t_k VP
t_j V'
t_k bık ıyelhdıc

(70)



So via Merge C ends up in either the embedded clause or the matrix clause

The initial proposal seems straightforward enough In the following sections we examine some of the details

3 2 2 Shortest Move

In Chomsky's recent work, Shortest Move takes over much of the work that has been done by Subjacency, the Head Movement Constraint, and Relativized Minimality in earlier versions of Principles and Parameters theory Shortest Move assumes that a constituent must move into the first position of the right kind up from its original position In (70) above, the *wh*-phrase may move in one fell swoop to the matrix Spec of CP because this is the shortest move available There is no other intervening A' Specifier position So, the movement is the shortest possible move for the *wh*-phrase and therefore results in a convergent derivation

3.2 3 The Role of C and a Question Projection

In this section I examine the role of C in Babine-Witsuwit'en and propose a projection distinct from CP where features relevant for clausal typing and scope appear

As we saw in section two, the overt position of the *wh*-phrase does not appear to determine scope in Babine-Witsuwit'en Since the meaning is the same regardless of the position of the *wh*-phrase in complex questions, the surface position of the *wh*-phrase cannot be the determiner of scope, nor can the presence of C, since C is not present when the *wh*-phrase is in situ under my proposal

These facts fall out if we assume a scope marker/question projection, distinct from C, which is always present in a question As I argued above, following Aoun & Li (1993b), the *wh*-elements are coindexed and interpreted with respect to a question operator in a higher position They receive a bound variable reading by virtue of the fact that they are bound by this operator in an A'-position Proposals by Katz & Postal (1964), Baker (1970), and Pesetsky (1987) also suggest a question operator located in CP (or the equivalent S/S') As is well known, many languages have overt *wh*-question morphemes The following examples from Aoun & Li show a question morpheme in Chinese (71) and Japanese (72)

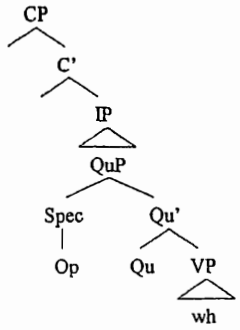
(71) Dare-ga ki-masu ka?
who-NOM come-POLITE Q
'Who will come?'

(72) Shei lai ne?
who come Q
'Who is coming?'

Presumably all languages have similar question licensers, though they may not be overt Aoun & Li argue that these question markers occur in a question projection, QuP They assume in their analysis of Chinese questions that this question projection occurs within the clause whose Spec position is filled by a question operator and whose head is filled by a question licenser (such as the overt marker *ka* in Japanese, *ne* in Chinese, or the abstract marker Qu in a language like English), resulting in a structure like the following [12]

[12] Their evidence that the XP projection is located in this position comes from island effects in Chinese Kim (1989) and Benmamoun (1991a b) have similar proposals Kim suggests that Korean question morphemes originate within IP The position of the XP likely varies across languages

(73)



Katz & Postal (1964) were the first to propose an element that serves to type a sentence They proposed that there is a Q morpheme, which types the sentence as a question, and a *wh*-morpheme, which "specifies the element or elements of the sentence that are 'questioned' " Aoun & Li adopt this general idea and suggest that their QuP is instead an XP that generates other types of sentences including indicatives, suggestions, etc , as well as questions So, the head of XP can have any of the four combinations of the features [±Q], [±wh] If the features are [+Q, +wh], a *wh*-question will be generated and a question operator will occur in the Spec position of this projection Aoun & Li propose that the operator then moves to the Spec of Comp inside or outside the clause [+Q, -wh] will result in *yes/no*-questions, [-Q, -wh] will result in statements, and [-Q +wh] will result in exclamatory statements (such as *How nice it is today!*)

I think the essence of these proposals is basically correct There is some evidence which suggests the presence of a projection distinct from CP which marks scope and houses question morphemes Features that type the sentence are also present here We now need to investigate whether there is additional evidence for the separation of CP and QuP

3 2 4 Separating *Wh*-Movement and Scope

We have established that there is no LF *wh*-movement Instead, a question operator is linked to a *wh*-phrase I have also suggested that this scope operator is in its own projection, distinct from CP, following Aoun & Li (1993b) However, what evidence is there for a projection distinct from CP which deals with scope and which is the position for features relevant to question interpretations? There are two kinds of evidence First, in languages which generally exhibit *wh*-movement, the position of the topmost *wh*-element is not always in the scope-taking position If *wh*-elements move to Spec of CP and this is the scope-taking position, how can such data be explained? For example, McDaniel (1989) shows that in languages with overt *wh*-movement (German and Romani) the *wh*-phrase can sometimes appear in a position lower than the position from which it takes scope, and there is a "scope-marker" (*was* in German, *so* in Romani) in the scope-taking position Data from McDaniel (1989) is shown below in (74) and (75) first from German and then from Romani

(74) Was$_i$ glaubt [$_{IP}$ Hans [$_{CP}$ [mit wem]$_i$ [$_{IP}$ Jakob jetzt t_i spricht]]]?
'What does Hans believe with whom Jacob is now talking?'

(75) So$_i$ [[$_{IP}$ o Demiri mislinol [$_{CP}$ [kas]$_i$ [$_{IP}$ i Arifa dikhl'a t_i]]]?
'What does Demir think whom Arifa saw?'

She concludes, then, that scope assignment and *wh*-movement are independent even in these languages which generally exhibit overt *wh*-movement

Also, Reis & Rosengren (1992) argue that there is *wh*-movement in non-interrogative imperative sentences in German Consider their example below

(76) Wen sag mir doch mal gleich daß Peter gestern besucht hat
whom tell me modal modal right away that Peter yesterday visited has
'Tell me right away who Peter visited yesterday '

The *wh*-word *wen* 'whom' does not take scope They conclude from examples like this one that scope assignment should be dissociated from *wh*-movement

The second kind of evidence that there is a projection distinct from C which is where scope is marked follows from the previous discussion That is, *wh*-elements in in-situ languages are obviously not in scope-taking positions overtly And we saw in Babine-Witsuwit'en, and will see again in the next section, that *wh*-phrases in the intermediate position in complex questions take matrix scope However I have argued that the presence of C is optional If a language has no C then there must be another projection in which the operator is located

Based on such evidence, it seems clear that scope assignment and *wh*-movement are distinct operations and we should not presume that the position of the topmost *wh*-phrase is the scope-marking position, even in *wh*-movement languages It also seems clear that the scope operator is in a distinct projection I would like to suggest that every sentence in most languages contains a QuP, which contains elements which mark scope and sentence type [13] The variation across languages with respect to the position of *wh*-phrases is then a result of the presence or absence of interrogative C, which is distinct from the QuP found in many languages

3 2 5 The Nature of QuP/TyP

As suggested above, every sentence must be typed as either a declarative, a *wh*-question, a *yes/no*-question, or an exclamatory statement (And perhaps other types exist in some languages) This can be done by features in the head of QuP, which I now rename TyP for Typing Phrase As mentioned above Aoun & Li (1993b) suggest that there are binary Q- and *wh*-features which make up the four sentence types Chomsky and Lasnik (1977) also suggest that each clause must be identified as ±WH marking it as a declarative or relative clause (-wh) or

[1] For a discussion of parametric variation with respect to QuP see Denham (forthcoming)

direct or indirect question (+wh) The purpose of the features in TyP is to type a clause, while the purpose of the operator in Spec is to mark scope Some languages, such as German and Romani, have overt scope markers in the head position of TyP Let's consider here some of the possibilities in Babine-Witsuwit'en

As I have mentioned above, binary features seem unnecessary If a *wh*-feature is present at all, it motivates the raising of a *wh*-feature (and its accompanying *wh*-phrase) to check off the feature in C If no C is present, no *wh*-feature is present [14]

(77)

sentence type	typing features
wh-question	Q, wh
yes/no-question	Q
declarative	no features

Q-features remain at LF and allow the sentence to be interpreted as a question The *wh*-features in the head position in C project an operator through Spec-head agreement [15] The operator then links to the *wh*-phrase(s) and marks scope

Let's consider some derivations If the *wh*-phrase stays in situ, the derivation is just as in Chinese, for example There is no CP present, but there is a typing phrase which houses the operator (in questions) and the typing features in the head Consider the derivation for the sentence in (78a) below [16]

(78) a George [Lillian ndu yunket] udilhye?
George Lillian what 3s bought 3s 3s know

b George [ndu Lillian yunket] udilhye?

c Ndu George [Lillian yunket] udilhye?

---

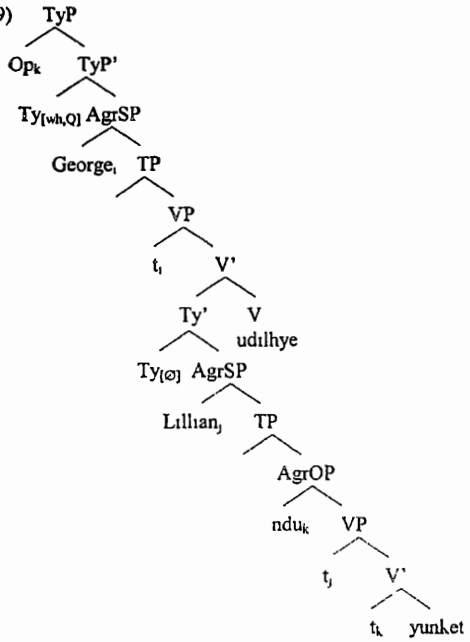
[14] I do not know the structure of exclamations in Babine-Witsuwit'en, so I do not include them here Perhaps they contain a *wh*-feature, but no Q feature, as is the case in English

[15] Aoun & Li (1993b) suggest that overt Qu-markers, such as those in Japanese and Chinese, are generated by Spec-head agreement The presence of the operator in Spec, they suggest, triggers the occurence of an agreement marker in Comp I believe the opposite is true The head of TyP is selected from the lexicon, carrying either an overt marker, or the feature bundle indicating the type of question If *wh*-question features are present ([Q wh]) then a Spec position is projected and an operator appears there

[16] As with all of the tree structures given here the situation is idealized Under derivationalist Minimalist assumptions overt movement is interleaved with structure-building Thus no such structure exists at any point in the derivation Some of the necessary movements are not indicated here

'What does George know (that) Lillian bought?

(79)



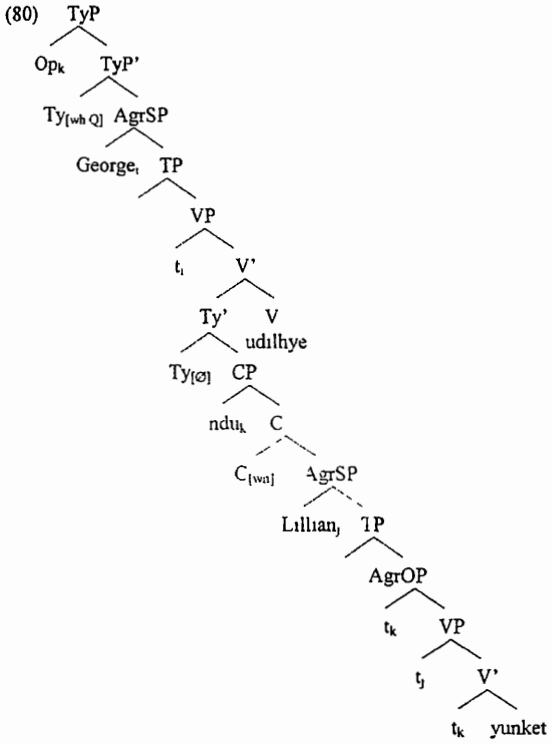
Features in the head Ty type each clause [17] These features are +Interpretable features Chomsky (1995) claims that ' certain features enter into interpretation at LF while others are uninterpretable and must be eliminated for convergence We, therefore, have a crucial distinction between ±interpretable" (277) This distinction is exactly the one we find between TyPs and CPs A TyP like the one in the higher clause in (79) contains +Interpretable features that need not be checked and may then survive to LF where they are interpreted The *wh*-feature in a C, however, is a –Interpretable feature that must be checked before LF in order to insure convergence The *wh*-feature in the higher Ty above projects an operator into the Spec TyP position This operator then links to the *wh*-word *ndu* 'what', which has a *wh*-leature, in the in-situ position This marks the scope of *ndu*

---

[17] I have suggested that every clause has a Typing Phrase *Udilhye* know being a verb that takes a proposition/sentence (as well as an interrogative) may hook up to a clause headed by a declarative Ty head, that is one with no features ([∅])

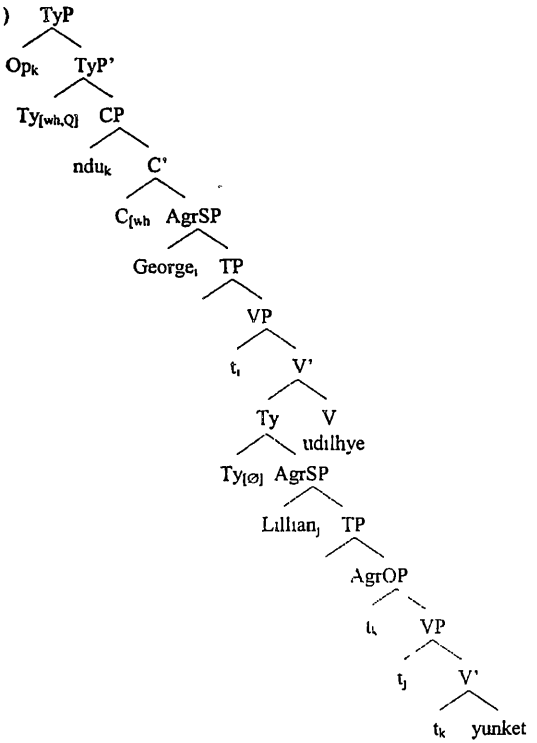
If a C is selected and ends up in an intermediate position via Merge in a sentence like (78b), then the *wh*-phrase with its inherent *wh*-feature moves to check off the –Interpretable *wh*-feature and the *wh*-phrase is linked to an operator in the upper TyP, as shown below

(80)



As in all operator-variable relationships, the operator must link to a variable to avoid vacuous quantification And if a C is selected and ends up in the higher clause of a biclausal structure, then the *wh*-phrase raises to check off this feature –Interpretable A TyP is also present here This structure is given below in (81)

(81)



As mentioned above, this long-distance movement does not result in a Subjacency violation Subjacency has been eliminated in favor of Shortest Move No other A'-position is available, so *ndu* 'what' makes the shortest possible moved to the higher Spec of CP

There are clearly other cases of optional choice in the grammar, though these work a bit differently For instance section one introduced the optional features TOP and FOC which may be selected if an element in a sentence is topicalized or focused What is different in these kinds of sentences, however, is that there is a difference in the meaning of the sentence with no fronted element and the sentence with the fronted element This is because the sentence with the fronted element let s say it's topicalized, contains a topicalization feature in a TopP which has been checked off by raising a word or phrase which carries a Top feature The topicalization feature of the lexical item(s) survives to LF where it is interpreted, and the meanings of the two sentences are, therefore, very different—one is topicalized the other is not However, in Babine-Witsuwit en, the meaning of a sentence with an in-situ *wh*-phrase is identical to that with a

fronted *wh*-phrase As I have said, and will demonstrate below, such optional *wh*-movement is triggered by the presence of a C, which may be optionally selected from the numeration When a C is selected, a *wh*-phrase raises to check off its *wh*-feature Contrary to sentence pairs containing optional topicalization or focus features, however, there is no meaning difference in these sentence pairs This is because the features relevant to interpretation are in a separate phrase (TyP)

In 3 1, we saw how optional selection of C can explain the varying positions of the *wh*-words in Babine-Witsuwit'en The addition of the typing projection changes the general proposal very little, but it enables us to account for the scope facts as well as providing an account of the data from other languages

3 3 Summary and Conclusions

In this section, I have proposed an analysis of optional *wh*-movement For languages like Babine-Witsuwit'en, selection of C from the numeration is optional I have also argued that *wh*-elements in situ overtly remain in position and do not raise to Spec of CP at LF Rather, they are linked/coindexed with a *wh*-operator This operator is located in a typing projection, TyP, in sentence-initial position

The distinction between +Interpretable and –Interpretable features appears to be the relevant difference between features of Ty and features of C and the possible combinations of these sets of features can account for the positions and interpretations of *wh*-phrases in Babine-Witsuwit'en

4 Conclusions

In this paper I have argued that Babine-Witsuwit'en has optional *wh*-movement I have suggested that many other languages which appear to have optional *wh*-movement do not Instead the movement in these languages is motivated by focus- and topicalization-features The optional *wh*-movement in Babine-Witsuwit'en can be explained by optional selection of C from the lexicon *Wh*-elements are linked/coindexed with a *wh*-operator which is located in a typing projection, TyP, in sentence-initial position

In other work (Denham, forthcoming), I discuss how this proposal accords with the data in languages that have *wh*-movement and those that do not, thus outlining a broad theory of *wh*-movement within the Minimalist Program

REFERENCES

Aoun, Joseph and Yen-hui Audrey Li 1993a *The syntax of scope* Cambridge, Mass MIT Press

Aoun, Joseph and Yen-hui Audrey Li 1993b *Wh*-elements in situ Syntax or LF? *Linguistic Inquiry* 24 199-238

Baker, C L 1970 Notes on the description of English questions The role of an abstract question morpheme *Foundations of Language* 7 197-219

Benmamoun, Elabbas 1991a Do-support Functional categories—representation and derivation University of Southern California manuscript

Benmamoun, Elabbas 1991b On the interaction between *wh*-movement, verb movement, and the QuP projection University of Southern California manuscript

Bergvall, Victoria 1983 *Wh*-questions and island constraints in Kikuyu A reanalysis *Current Approaches to African Linguistics* Dordrecht Foris

Boadi L A 1974 Focus-marking in Akan *Linguistics* 140 5-57

Bokamba, Eyamba 1976 On the syntax and semantics of wh-questions in Kikongo and Kiswahili *Studies in the Linguistic Sciences* 6 2 65-88

Cheng, Lisa 1991 On the typology of *wh*-questions MIT dissertation

Chomsky, Noam 1993 A minimalist program for linguistic theory In *The View from building 20 Essays in linguistics in honor of Sylvain Bromberger*, ed Kenneth Hale and Samuel Jay Keyser, 1-52 Cambridge Mass MIT Press

Chomsky Noam 1995 *The Minimalist Program* Cambridge Mass MIT Press

Chomsky Noam and Howard Lasnik 1977 Filters and control *Linguistic Inquiry* 8 425-504

Denham, Kristin forthcoming An minimalist account of optional *wh*-movement University of Washington dissertation

Goldsmith John 1981 The structure of *wh*-questions in Igbo *Linguistic Analysis* 7 367-393

Haiman, John 1985 *Natural syntax Iconicity and erosion* New York Cambridge University Press

Huang, C -T James 1982 Logical relations in Chinese and the theory of grammar MIT dissertation

Katz, Jerrold and Paul Postal 1964 *An integrated theory of linguistic descriptions* Cambridge, Mass MIT Press

Kenstowicz, Michael and Wafaa Wahba 1983 *Wh*-in-situ constructions in Egyptian Arabic *Current Approaches to African Linguistics*, ed Johnathon Kaye, Hilda Koopman, Dominique Sportiche, and Andre Dugas Dordrecht Foris

Kim, Soowon 1991 Chain scope and quantification structure Brandeis University dissertation

Langacker, Ronald W 1965 French interrogatives A transformational description *Language* 41 4 587-600

Langacker, Ronald W 1972 French interrogatives revisited In *Generative Studies in Romance Languages*, ed Jean Casagrande and Bohdan Saciuk Rowley Mass Newbury House

Langer, Nils 1995 Scrambling is not optional *Newcastle and Durham Working Papers in Linguistics* 3 125-145

McCloskey James 1979 *Transformational syntax and model theoretic semantics A Case Study in Modern Irish* Dordrecht Kluwer

McDaniel, Dana 1989 Partial and multiple wh-movement *Natural Language and Linguistic Theory* 7 565-604
Perrott, D 1957 Teach yourself Swahili London English Universities Press
Pesetsky, David 1987 *Wh*-in-situ Movement and unselective binding In *The Representation of Indefiniteness* Cambridge, Mass MIT Press
Reis, Margaret and Inger Rosengren 1992 What do WH-Imperatives tell us about WH-movement *Natural Language and Linguistic Theory* 10 1 79-118
Riemsdijk, Henk van and Edwin Williams 1981 NP-Structure *The Linguistic Review* 1 171-217
Saah, Kofi 1981 Analysis of the structure of questions in Akan Indiana University, Bloomington MA thesis
Saah, Kofi 1988 Wh-questions in Akan *Journal of West African Linguistics* 18 1 7-28
Wahba, Wafaa Abdel-Faheem Batran 1991 LF movement in Iraqi Arabic *Logical structure and Linguistic Structure*, ed C -T James Huang and Robert May 253-276 Dordrecht Kluwer
Welmers, William 1973 *African Language Structures* Berkeley University of California Press